UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
FISH AND WILDLIFE ENHANCEMENT
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TAKE PRIDE IN AMERICA

Ref FWE/CO:ES:Plants-Spiranthes diluvialis, Ute ladies'-tresses orchid

July 14, 1992

To Whom It May Concern:

The U.S. Fish and Wildlife Service (Service) has established interim requirements and guidelines for surveys to determine the presence or absence of the federally threatened species Spiranthes diluvialis, Ute Ladies'-tresses. These guidelines were developed by the Service in consultation with biologists and ecologists knowledgeable about the species in order to gain more information about the species, identify potential habitat, and streamline and standardize survey procedures.

Spiranthes diluvialis occurs in seasonally moist soils and wet meadows near springs, lakes, or perennial streams and their associated flood plains below 6,500 feet elevation in Utah, Colorado, and Nevada. Typical sites include old stream channels and alluvial terraces, subirrigated meadows, and other sites where the soil is saturated to within 18" of the surface at least temporarily during the spring or summer growing seasons.

The moist soil conditions and vegetation composition of known Spiranthes sites suggest that wetlands regulated under the Clean Water Act qualify as potential Spiranthes habitat. Therefore, delineated wetlands, as well as other drier sites matching the description above, should be surveyed.

Documentation of compliance with survey requirements and recommendations is accomplished through submission to the Service of a survey report. The Service will respond with a letter indicating acceptance of the report.

Copies of the interim requirements can by obtained by contacting the Service at one of the following locations:

Bernardo Garza
U.S. Fish and Wildlife Service
730 Simms St., Room 290
Golden, CO 80401
(303) 231-5280

Larry England
U S. Fish and Wildlife Service
1745 West 1700 South
Salt Lake City, Utah
(801) 524-5630

Lucy Jordan
U.S. Fish and Wildlife Service
529 25 1/2 Road, Suite B-113
Grand Junction, CO 81505
(303) 243-2778

The Service recommends that this letter of notification be copied and distributed to anyone planning a project in areas that may qualify as potential Spiranthes habitat as described above.

Reed E Harris

Reed E Harris
Field Supervisor-CO/UT

ADMIN RECORD

INTERIM SURVEY REQUIREMENTS FOR SPIRANTHES DILUVIALIS

July 13, 1992

The U.S. Fish and Wildlife Service (Service) has established the following interim requirements and guidelines for surveys to determine the presence or absence of the federally threatened species Spiranthes diluvialis, Ute Ladies'-tresses. These guidelines were developed by the Service in consultation with biologists and ecologists knowledgeable about the species These guidelines and recommendations are designed to supplement, not substitute for, professional methods, expertise, and judgement typically used to conduct rare plant surveys

Because the species is so rare, very little is known about its habitat preferences and population ecology. These interim survey requirements have been developed in order to gain more information about the species, identify potential habitat, and streamline and standardize survey procedures. As more information becomes available through these surveys, the interim requirements will be revised and simplified as appropriate.

Documentation of compliance with these requirements and recommendations is accomplished through submission to the Service of a survey report. The Service will respond with a letter indicating acceptance of the report.

1. DESCRIPTION OF TYPICAL HABITAT

Spiranthes diluvialis occurs in seasonally moist soils and wet meadows near springs, lakes, or perennial streams and their associated flood plains below 6,500 feet elevation in Utah, Colorado, and Nevada. Typical sites include old stream channels and alluvial terraces, subirrigated meadows, and other sites where the soil is saturated to within 18" of the surface at least temporarily during the spring or summer growing seasons. Associated vegetation typically falls into the Facultative Wet wetland vegetation classification category (as used by the U.S. Army Corps of Engineers for wetland delineation). The species occurs primarily in areas where the vegetation is relatively open and not overly dense, overgrown, or overgrazed. Although very rare now, it is estimated that it was once common in low elevation riparian areas in Colorado, Utah, and Nevada.

The moist soil conditions and vegetation composition of known Spiranthes sites suggest that wetlands regulated under the Clean Water Act qualify as potential Spiranthes habitat. Therefore, delineated wetlands, as well as other drier sites matching the description above, should be surveyed.

2. QUALIFICATIONS OF SURVEYOR

Spiranthes is difficult to identify in the field, and since the orchid is rare and flowers for such a short time, few people have had the opportunity to become acquainted with the species. The Service does not want to exclude any qualified person from conducting surveys. Therefore, the Service has developed a minimum set of qualification criteria that demonstrate whether a surveyor is sufficiently acquainted with Spiranthes to collect consistent and accurate information for the survey report Documentation that these criteria

have been met is accomplished by submitting a statement of surveyor qualifications as part of the survey report

The survey report shall contain a statement of qualifications of the individual conducting the survey, including

a. description of botanical expertise and training (e.g , graduate degree in botany, ecology, or other appropriate discipline),

b. experience in conducting rare plant surveys (list dates, locations, and plants included in previously conducted surveys),

c. actions taken to become acquainted with the known locations and appearance of Spiranthes diluvialis (such as visiting herbaria to look at specimens, conversations or site visits with others familiar with the species for a description of ecology and likely occurrences);

d. documentation of correct identification of Spiranthes diluvialis in the field. The surveyor is required to enclose a photograph of the species taken at a known site and a statement certifying when and where the photograph was taken;

e. references, particularly documenting contact with known Spiranthes experts.

3. SITES REQUIRING A SURVEY

Sites below 6,500 feet elevation exhibiting the following features shall be surveyed for Spiranthes diluvialis:

a. seasonally high water table (to within 18 inches of the soil surface for at least 1 week sometime during the growing season, growing season defined as when soil temperatures are above 41 degrees F);

b. in or near wet meadows, stream channels, or floodplains;

c. vegetation falling into the Facultative Wet or Obligate Wet classification, including introduced pasture grasses;

d. delineated wetlands as specified under the Clean Water Act.

Sites exhibiting the following features shall also be surveyed for the orchid if they otherwise meet the criteria indicating potential suitability as Spiranthes habitat as listed above

e. fields heavily grazed by cattle, horses, sheep, or goats yearround for may years,

f. sites where the vegetation is composed mostly of noxious weeds including for example, but not necessarily limited to, such species as Arctium minus (burdock), Bromus tectorum (cheatgrass), Cardaria spp. (whitetop, hoary cress), Cirsium arvense (Canada thistle), Conium

maculatum (poison hemlock), Convolvulus arvensis (field bindweed), Dipsacus sylvestris (teasel), Malva neglecta (cheeseweed), Medicago sativa (alfalfa), Plantago major (plantain), Rumex crispus (curly dock), or Thlaspi arvense (pennycress),

g. sites composed of monocultures such as Bromus inermis (smooth brome), Poa pratensis (Kentucky bluegrass), and Phalaris arundinacea (reed canarygrass),

h sites where an efflorescence of salts is visible along stream banks, pond shores, on the surface of the ground, or in places where the soil is disturbed, or where mostly salt-tolerant species are growing.

4. SITES NOT REQUIRING A SURVEY

Some sites are either clearly not appropriate Spiranthes habitat or have very low potential to be Spiranthes habitat A survey for Spiranthes is not required for such sites. Sites below 6,500 feet elevation not requiring a survey for Spiranthes include:

a. highway rights-of-way built on filled and compacted soil material, but revegetated with either native or non-native species;

b. highway rights-of-way built on rock fills, either revegetated or not revegetated;

c. rock or soil fills with steep backslopes that probably exceed the natural angle of repose (may or may not be associated with a road);

d active construction sites where all vegetation has been stripped exposing bare soil;

e. construction sites where construction has been completed within the last 5 years, but the area has not been revegetated;

f. prairie dog towns;

g. short grass prairie;

h. sites that are too high and dry for the orchid, as evidenced by (1) lack of soil moisture (temporary saturation to within 18" of the soil surface) in the spring or summer growing seasons, (2) lack of facultative wetland species, and (3) lack of species normally found growing with the orchid;

i. monocultures of cattails (Typha latifolia) Note that although cattail areas need not be surveyed, drier areas surrounding or leading to cattail areas must be surveyed if they are included in the project area.

5. TIMING OF SURVEY

Because Spiranthes is very difficult to locate unless it is flowering, because timing of flowering varies, and because the species may not flower every year, the following requirements must be met:

a. Surveys shall be conducted during the blooming season, which is normally between July 20 and August 31 However, surveys may begin earlier or later if flowering is occurring in a nearby known population comparable to the site being surveyed.

b. Two surveys, no closer than 14 days apart, shall be conducted during the above survey season. Survey dates for each site checked shall be noted in the report.

c. In drainages where Spiranthes is known to occur, it is recommended, but not required, that surveys be conducted for two consecutive years.

Under very special circumstances, earlier surveys may be possible for sites small enough to allow a "hands and knees" search in each square foot for vegetative parts of Spiranthes. The Service shall be contacted for prior approval and procedural requirements for such early surveys

Surveys will be considered final for three years. If habitat alteration has not begun within three years, the Service must be contacted regarding the need for a survey update.

6. MAPS

The Service recommends that, where available, S.C.S. soil maps (for location of wetland soils) and National Wetland Inventory maps be consulted prior to site surveys. Areas with wetland soils or known locations of wetlands will need to be surveyed carefully. Surveyors should be aware that Spiranthes is not limited to mapped wetlands, however.

In order to avoid duplication of effort and gain more information about the ecology and distribution of Spiranthes, a U.S.G.S. 7 1/2 minute quad map must be submitted with the survey report showing routes taken for all search sites regardless of whether a population of the species was located during the search.

For survey sites too small to be adequately represented on a 7 1/2 minute quad map, an engineering drawing or more detailed map showing the area that has been surveyed must be included in the report The site(s) should be indicated and labeled on the accompanying U S.G S. 7 1/2 minute quad map.

7. ECOLOGICAL AND SITE FEATURES

In order to gain more information about the ecology and site characteristics of Spiranthes so that better predictions about its location and distribution can be made, the following information must be collected and reported for each site surveyed

a. For sites disqualified as potential Spiranthes habitat, describe the basis on which the site was disqualified.

b For sites requiring a survey, the following information must be collected This information can be brief and qualitative for sites where Spiranthes is not found (a few words, a phrase, or a descriptive sentence is sufficient).

1. list the most frequent or dominant associated plant species of both the overstory and understory vegetation (e g., overstory of mature cottonwood trees with an understory of orchard grass and smooth brome);

2. describe the plant community, including a qualitative assessment of dominance (e.g., riparian willow community, willows dominant, with native grasses (Deschampsia caespitosa) and sedges),

3. describe the ecological condition/management history of the site (such as cultivated field, old gravel mine, good condition native grassland with winter cattle grazing, recently flooded stream edge);

4. describe the geomorphology of the site, including, for example, the nature of the material (e.g., alluvium), the landscape position (e.g. bench above old stream bed);

5. describe the soils including, for example, texture, whether moist, presence of mottling or other hydric soil indicators, and list the map unit from the Soil Conservation Service county soil survey if available;

6. describe the hydrologic characteristics, for example, depth to water table (if possible to determine without major excavation), inferences about frequency, duration, and season of flooding, presence of standing water, high water mark of a stream or water body in relation to location of surveyed site;

7. describe any other site characteristics that appear relevant to understanding the ecology, population biology, or distribution of Spiranthes diluvialis.

In addition, for each site where a population of Spiranthes diluvialis is found, the following information must be collected and included in the survey report

8. map the population location on a U.S G S. 7 1/2 minute quad (and on a finer scaled map or engineering drawing if appropriate),

9 count the number of individuals if fewer than 500,

10. estimate the number of individuals if more than 500 Include a description of the method used for population estimation,

11. note the phenological stage of the plants (e g , proportion of plants that are flowering, proportion of flowers that have set seed);

12. note the specific geomorphologic, hydrologic, and soils conditions where the population occurs if it varies from the site description above;

13. note any other possibly-relevant ecological information,

14. include a photograph of the population that illustrates its setting and habitat.

8 SURVEY REPORT

The Survey Report submitted to the Service should follow the following outline:

1 Name and qualifications of surveyor.

2. Brief project description indicating proposed impact to site

3. Site location (address and legal description).

4. Dates surveys were conducted.

5. Ecological and site features.

A. Basis for site disqualification, if appropriate.

B. Surveyed site ecological features:

1. overstory and understory vegetation
2. plant community description
3. ecological condition/management history
4. geomorphology
5. soils
6. hydrology
7. other relevant site features

If Spiranthes present

8. population count or estimate
9 phenology of population
10. specific geomorphology, hydrology, and soils characteristics
11 other possibly relevant information

6 Appendices

A. maps
B photographs
1 documenting qualifications of surveyor
2 Spiranthes and its habitat, if discovered on surveyed site

9 NOTIFICATION

The U S Fish and Wildlife Service shall be notified immediately if a new population of Spiranthes diluvialis is discovered

For sites located in Colorado, the surveyor may notify either:

Bernardo Garza
U S. Fish and Wildlife Service
730 Simms St., Room 290
Golden, CO 80401
(303) 231-5280

Lucy Jordan
U S Fish and Wildlife Service
529 25 1/2 Road, Suite B-113
Grand Junction, CO 81505
(303) 243-2778

For sites located in Utah, the surveyor may notify

Larry England
U.S. Fish and Wildlife Service
1745 West 1700 South
Salt Lake City, UT 84104
(801) 524-5630

10. SERVICE APPROVAL

Survey reports for sites in Colorado shall be submitted to either of the two Colorado addresses above. Survey reports for sites in Utah shall be submitted to the Utah address above. The Service will review submitted reports and reply with a written letter of acceptance within 30 days of receipt of the report. If the survey report is judged insufficient for any reason, the Service will notify the author within 30 days and discuss revisions If the report is judged insufficient due to an inadequate survey, the Service will make every effort to notify the author promptly so that a satisfactory survey may be completed during the allowed survey time. However, given the narrow survey time frame, it may not be possible to rectify an inadequate survey effort during the current field season

Surveys will be considered final for three years If habitat alteration has not begun within three years, the Service must be contacted regarding the need for a survey update.

11. SERVICE FOLLOW-UP

The survey reports and maps will be retained by the Service Ecological information will be summarized and used to improve our understanding of Spiranthes habitat and help predict actual and potential habitat Survey requirements may be revised for 1993 if information gained through the 1992 surveys indicates that revision is appropriate.